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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,668	08/24/2001	Yasushige Nakamura	011071	1050

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EXAMINER

DOTE, JANIS L

ART UNIT PAPER NUMBER

1756

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/935,668

Applicant(s)

NAKAMURA ET AL.

Examiner

Janis L. Dote

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9-11,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9-11,13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

1. The examiner acknowledges the cancellation of claims 2, 8, 12, and 15-17, and the amendments to claims 1, 3, 5-7, 9-11, and 13 filed in the amendment on Oct. 22, 2003 (Amdt102203). Claims 1, 3-7, 9-11, 13, and 14 are pending.

The amendment to the claims filed in the amendment on Aug. 11, 2003 (Amdt081103), was not in compliance with 37 CFR 1.121, for the reasons discussed in the notice of Non-Compliant Amendment mailed on Aug. 11, 2003. Accordingly, the amendment to the claims in Amdt081103 has not been entered.

2. The objection to the specification set forth in the office action mailed on Apr. 11, 2003 (CTNF041103), paragraph 3, has been withdrawn in response to the amended paragraph beginning at page 29, line 3, of the specification, filed in Amdt081103.

The rejection of claims 15-17 under 35 U.S.C. 112, first paragraph, set forth in CTNF041103, paragraph 6, has been mooted by the cancellation of claims 15-17.

The rejections under 35 U.S.C. 103(a) of claims 1, 3/1, 4/3/1, 5/1, and 6/1 over US 6,232,028 B1 (Kushino'029) combined with US 6,361,914 B1 (Semura) and Japanese Patent 2000-075544 (JP'544), and of claims 7, 9/7, 10/9/7, 11, 13/11, and 14/13/11 over Kushino'029 combined with Semura, JP'544, and Diamond, Handbook of Imaging Materials, pp. 160-163, set forth in

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CTNF041103, paragraphs 8 and 9, respectively, have been withdrawn in response to the amendments to claim 1, 7, and 11, adding the limitation of now-canceled claims 2, 8, and 12, that the first polyester resin and second polyester resin have acid values from 20-40 and from 5-20, respectively, and that the acid value of the entire polyester resin is from 15 to 35. The prior art does not teach or suggest a binder resin comprising a first and second polyester resin having the acid values recited in the instant claim.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 3-7, 9-11, 13, and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 7, and 11, and claims dependent thereon, recite a polyester resin comprising a first crosslinked polyester resin having a softening point Tsp of not lower than 120°C and lower than 170°C, and a second "non crosslinked polyester resin" having a Tsp of not lower than 80°C and lower than 110°C. The originally filed specification does not provide an adequate written description of the generic second "non crosslinked polyester resin" recited in the instant claims. Throughout the originally filed specification, the specification only discloses a polyester resin comprising a first non-linear polyester and a second non-linear polyester resin having a Tsp of not lower than 80°C and lower than 110°C. See the originally filed specification, page 4, line 36, to page 5, line 1; page 8, lines 11-16 and 24-31; and page 10, lines 8-10. The second "non crosslinked polyester resin" recited in the instant claims is broader than the disclosed "second non-linear polyester," because the former includes "linear polyester" resins. The term "linear polymer" is usually defined as polymers that are not branched, cross-linked, or of a network structure. See Polymer Technology Dictionary, page 225. In light of the definition of the term "linear polymer," the term "non-linear polymer" thus refers to polymers that are branched, cross-linked, or of a

network structure. The originally filed specification does not disclose that the second non-linear polyester is a non-crosslinked polyester resin as recited in the instant claims. Furthermore, the two particular "non-crosslinked" polyester resins 2-2 and 2-3 reported in Table 1, page 24 of the specification, do not provide an adequate written description of the broader second non-crosslinked polyester resin recited in the instant claims. The particular polyester resins 2-2 and 2-3 have a particular chemical composition. Both resins are obtained by reacting two particular alcohol components, polyoxypropylene (2.2)-2,2-bis(4-hydroxy-phenyl)propane and polyoxyethylene (2.2)-2,2-bis(4-hydroxy-phenyl)propane in a 1:1 molar ratio, with the particular acid component, terephthalic acid. Resins 2-2 and 2-3 also have Tsp's of 80°C and 100°C, respectively, and acid values of 7.5 and 10.6, respectively. The broader generic non-crosslinked polyester resin having a Tsp of not lower than 80°C and lower than 110°C and an acid value from 5 to 20, recited in the instant claims, is far broader than the two disclosed narrow species, and encompasses polyester resins not related to resins 2-2 and 2-3.

Applicants' arguments filed in Amdt081103 have been fully considered but they are not persuasive.

Applicants assert that "one skilled in the art would realize that the description of the non-crosslinked polymers as 'non-linear' was an error, and would realize that the error was in calling the second polymer 'non-linear.'" Applicants submit that the Rule 132 declaration, which was executed by Masatoshi Kimura on Aug. 5, 2003, filed on Aug. 11, 2003, shows that a person skilled in the art, "upon reading the specification, both easily recognized that an error was apparent, and also easily recognized what the correct meaning should have been." The declaration bases its conclusion that the originally disclosed and claimed "non-linear" second polyester resin in the instant specification was a readily apparent error and that the correction should be "a second linear polyester" on: (1) the disclosure in the instant specification, in particular that at page 10, lines 3-25; (2) exemplified polyesters 2-1 to 2-5 of the specification; and (3) paragraph 0021 of the certified English-language translation of the priority document, Japanese Patent Application No. 2001-101159, filed on Aug. 11, 2003.

However, the declaration is merely conclusory. The evidence on the present record does not support the statements made by declarant for the following reasons:

(1) Contrary to declarant, the context of the disclosure regarding the "logical incongruity between the first, nonlinear,

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polyester and the second, non-linear polyester" does not lead a person having ordinary skill in the art to recognize that the disclosed second non-linear polyester is an obvious error, and that the second polyester should have been identified as a non-crosslinked polyester resin as recited in the instant claims. As discussed in the above rejection, the originally filed specification only discloses a polyester resin comprising a first non-linear polyester resin and a second non-linear polyester resin having a Tsp of not lower than 80°C and lower than 110°C. There is no disclosure that the second polyester resin is a linear polyester resin or that it is a non-crosslinked polyester as recited in the instant claims. For example, as discussed in the rejection, the specification at page 8, lines 6-8 and 11-13, discloses that the first non-linear polyester resin has a softening point Tsp of not lower than 120°C and lower than 170°C and the second non-linear polyester resin has a Tsp of not lower than 80°C to lower than 110°C. The specification at page 8, lines 17-23 and 26-31, further discloses that when the first and second polyester resins have a Tsp outside the above ranges, "low energy fixability" is lowered or "void resistance" is lowered. The specification at page 10, lines 3-11, of the specification, discloses that "the first

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polyester resin is a non-linear polyester resin containing a tri- or polyvalent monomer, and also has a comparatively high molecular weight, and thus exhibits excellent void resistance, but is not easily fixed by means of low light emission energy." The specification further discloses that "[o]n the other hand, the second polyester resin is a non-linear polyester resin and can have excellent low energy fixability. However, the second polyester resin is inferior in void resistance because of its low viscosity" (emphasis added). The specification at page 10, lines 15-20, discloses that "when using the first and second polyester resins in combination . . . the synergy effect of merits of the first and second polyester resins can achieve excellent flash fixability without causing voids."

Declarant has not indicated what disclosed property or properties of the second non-linear polyester resin in the disclosure of the instant specification would have led a person having ordinary skill in the art to recognize clearly that the disclosed second polyester resin could only have been identified as a "linear" or non-crosslinked polyester resin. Cross-linked polyester resins having a Tsp within the range of not lower than 80°C and lower than 110°C, (i.e., 95 or 100°C) and "no chloroform insolubles" are known in the toner art. See US 4,863,824 (Uchida), for example, Tables 1 and 2, polyester nos. 1-2b, 2-1,

2-2a, and 2-3. Uchida discloses that said non-linear polyester resins having a low content of trivalent or higher valency monomers, but which have a low molecular weight, ensure "ease of toner image fixing at low temperatures." Col. 3, lines 19-25. Thus, contrary to declarant, the second polyester resin could have been a non-linear polyester resin.

(2) Contrary to declarant, the second resins 2-1, 2-4, and 2-5 are outside the scope of instant claims 1, 7, and 11, because they have Tsp's of 70, 110, and 120°C, respectively, which are outside the range of "not lower than 80°C and lower than 110°C" recited in those claims. As discussed in the rejection, the two narrow exemplified species of non-crosslinked polyester resins, 2-2 and 2-3, do not provide an adequate written description of said broad second non-crosslinked polyester resin recited in instant claims 1, 7, and 11. A person having ordinary skill in the art would not of necessity have recognized that the two narrow exemplified species are representative of the entire scope of the broad second non-crosslinked polyester resin recited in the instant claims.

(3) As discussed in the rejection, the originally filed specification only refers to the second polyester as a "non-linear" polyester resin having a Tsp of not lower than 80°C and

lower than 110°C. There is no disclosure of a second non-crosslinked polyester resin as broadly recited in instant claims 1, 7 and 11. Nor is there any disclosure that the disclosed second non-linear polyester is not cross-linked.

Furthermore, the priority document is not part of the originally filed specification. The originally filed specification was not filed in the non-English language (37 CFR 1.52(d)), nor did it explicitly incorporate said priority document by reference. Applicants may not rely on the disclosure of the unincorporated foreign priority document to provide the missing antecedent basis for the second linear polyester broadly recited in the instant claims. See Ex parte Bondiou, 132 USPQ 356 (Bd. App. 1961). The application must be complete when filed.

Moreover, the second polyester resin is described as a non-linear polyester throughout the translation of the priority document, but for page 12, lines 10-12, of the translation, i.e., paragraph 0021 of the priority document. See the translation, page 1, line 17, page 2, lines 15-16, page 3, lines 6-7, page 7, lines 8-9, page 10, lines 10 and 22-23, page 38, lines 17-18, page 40, lines 1-2, and page 41, lines 9-10. Thus, contrary to declarant's comments, it is the one instance, i.e., paragraph 0021, in the translation, that the

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second polyester resin is linear that would appear to be in error.

Accordingly, for the reasons discussed above, the rejection stands.

5. **THIS ACTION IS MADE FINAL.** Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (703) 872-9306.

Any inquiry of papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

JLD

1/3/04

Janis L. Dote
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PRIMARY EXAMINER
GROUP 1555
1700